FORESTRY ABSTRACTS

Volume 40

Prepared by

Commonwealth Forestry Bureau, Oxford

1979

ISSN 0015-7538

14K

© *Commonwealth Agricultural Bureaux 1980*

All rights reserved. No part of this publication may be reproduced in any form or by any means, electronically, mechanically, by photocopying, recording or otherwise, without the prior permission of the copyright owner.

The Executive Council of the Commonwealth Agricultural Bureaux is a signatory to the Fair Copying Declaration, details of which can be obtained from The Royal Society, 6 Carlton House Terrace, London; S.W.1.

published by

Commonwealth Agricultural Bureaux,
Farnham House, Farnham Royal,
SLOUGH SL2 3BN, UK.

printed by

Unwin Brothers Ltd., The Gresham Press, Old Woking, Surrey, UK.

CONTENTS

ABSTRACTS

1.	General publications and general techniques	1	39	67	105	127	157	203	231	279	331	375	413
	General publications	1	39	67	105	127	157	203	231	279	331	375	413
	Techniques and methodology	1	40	67	106	129	158	204	233	281	332	377	413
	Miscellaneous	–	–	–	–	–	–	–	–	–	–	377	–
2.	General aspects of forestry	2	40	68	106	129	159	204	233	282	332	377	414
	General	–	–	68	–	–	–	–	–	–	–	377	414
	Forestry from the national, regional, or international point of view. Forest history	2	40	68	106	129	159	204	233	282	332	377	414
	Legislation	3	41	69	–	130	161	205	235	283	334	378	415
	Taxation. Subsidies, loans, etc.	–	–	69	107	130	161	205	235	284	334	378	–
	Insurance	–	–	–	–	–	–	–	–	–	–	–	–
	Education and research. Information services	3	41	69	107	130	161	205	235	284	334	378	415
	Organizations and publicity	3	–	–	–	–	–	–	–	284	334	378	–
	Labour considerations. Safety. Work study	3	41	70	–	131	162	205	235	284	335	378	416
	Miscellaneous	–	–	70	107	131	162	–	–	284	335	–	416
3.	Silviculture	3	42	70	107	131	163	205	235	285	335	378	416
	General	3	–	–	–	–	163	–	235	285	335	378	416
	Choice of species. Trials of species, provenances etc.	3	–	70	107	131	163	205	235	285	335	379	416
	Seed (for propagation)	4	42	71	108	131	163	206	236	285	336	379	417
	Vegetative propagation	4	43	71	108	132	164	206	236	286	336	380	418
	Use of fertilizers	5	43	72	108	132	164	207	237	287	337	381	419
	Nursery practice	6	44	72	109	133	165	207	237	287	337	381	420
	Establishment and tending of stands ...	6	44	72	109	134	166	208	238	288	338	381	421
	Silviculture by species and species groups	9	46	75	110	136	170	210	242	292	342	386	425
	Machinery	10	46	76	111	137	171	211	243	293	343	386	426
	Growing and collection of forest products other than wood	10	46	76	111	137	171	211	243	293	343	387	427
4.	Forest mensuration and management ...	11	47	78	111	138	172	211	244	296	344	387	428
	General	–	–	–	111	–	–	–	244	–	–	–	428
	Systems and units of measurement, including conversion tables. Measuring instruments and apparatus	–	–	78	–	–	–	211	244	296	344	387	428
	Measurements of trees, stands, and round timber	11	47	78	111	138	172	211	244	296	344	387	429
	Growth, increment. Biomass	11	47	78	111	138	172	212	245	296	345	388	430
	Management plans and planning	12	48	79	–	140	173	213	246	297	347	388	431
	Inventory, including sampling methods	13	49	80	–	140	173	213	246	298	347	388	432
	Surveying and mapping. Remote sensing	13	49	80	112	140	174	214	247	298	347	389	432
	Business economics of forestry	13	49	81	113	140	174	214	247	298	347	389	433
	Administration of forest enterprises ...	13	50	81	113	–	174	–	247	–	348	390	433
	Miscellaneous	–	–	–	–	–	–	–	–	299	348	–	–
5.	Physical environment	13	50	81	113	140	174	214	248	299	348	390	433
	General	–	–	81	–	–	–	–	–	299	348	–	–
	Climate, and atmospheric influences ...	13	50	81	113	140	174	214	248	299	348	390	433
	Land form. Slope. Aspect. Altitude ...	–	50	–	114	141	174	214	248	299	349	–	434
	Soil	14	50	82	–	141	174	214	248	299	349	390	–
	Soil water/plant relations	15	51	83	114	142	176	215	249	300	350	391	434
	Soil nutrient relations	16	51	83	115	142	176	215	249	300	351	391	435
	Pollution. Damage by man	16	51	83	115	143	176	215	250	302	351	391	435
	Effect of various growth factors (including silvicultural treatment) on wood properties	17	51	–	115	143	177	215	250	304	352	392	–
	Influence of forest on the physical environment	–	51	84	115	–	177	–	250	304	352	392	436
	Miscellaneous	–	–	84	–	–	–	216	–	–	–	392	–
6.	Fire	17	51	84	115	143	177	216	251	304	353	392	436
	General	17	51	84	–	143	177	216	251	304	353	392	436
	Predisposing factors and causes. Fire-danger rating	18	51	84	115	–	177	216	251	–	–	392	436
	Prevention and control	18	51	84	–	143	178	216	251	304	353	392	437
	Effects of fire	18	51	84	115	144	178	–	252	304	353	392	437
	Miscellaneous	–	–	–	–	–	–	–	252	–	–	–	437

7. Plant biology	18	52	85	115	144	178	217	252	304	353	392	437
General	–	–	–	115	–	–	–	–	304	353	392	–
Silvicultural characters. Habit. Phenology	18	52	85	115	144	178	–	252	305	353	393	437
Anatomy, morphology	19	52	85	116	144	179	217	253	305	353	393	438
Chemistry	20	52	85	116	144	179	217	253	306	354	393	438
Physiology. Biochemistry	20	52	86	116	145	179	217	253	306	354	393	439
Reproduction	21	53	87	116	145	180	–	254	307	354	394	439
Taxonomy, nomenclature. Herbaria	22	53	87	117	146	180	217	254	308	354	394	440
Floras, checklists	22	53	87	117	146	181	217	255	308	355	395	440
Plant ecology	22	53	87	117	146	181	217	255	309	355	395	441
Miscellaneous	–	–	–	–	–	182	–	–	–	–	–	–
8. Genetics and breeding. Variation. Evolution	23	54	89	118	147	182	218	257	310	357	397	443
General	23	54	89	118	–	182	218	257	310	357	397	443
Gymnosperms	24	54	89	118	147	183	218	257	310	357	397	444
Angiosperms	24	54	90	118	147	183	219	258	311	358	399	447
Miscellaneous	–	–	–	–	–	–	–	259	–	358	–	–
9. Mycology and pathology	24	54	90	119	147	183	219	259	311	358	400	448
General	24	–	90	119	147	183	219	259	–	358	–	–
Fungal ecology	24	–	–	–	–	183	–	–	311	–	400	448
Mycorrhiza and other fungal and bacterial symbioses	24	54	90	119	147	183	219	259	311	359	400	448
Fungal diseases	–	55	91	119	147	184	219	259	311	359	400	448
Bacteria	–	–	–	–	–	187	222	–	317	363	–	451
Viruses, mycoplasmas etc.	26	56	93	120	148	187	222	261	317	363	–	–
Protection and control	26	–	93	120	148	187	222	261	318	363	403	452
Miscellaneous, including mistletoe	26	56	–	120	–	187	222	262	318	363	403	452
10. Insects and other invertebrates	26	56	94	120	149	188	222	262	318	364	403	452
General	–	–	–	120	149	–	222	262	–	364	–	–
Invertebrate ecology	26	–	–	–	149	188	222	263	318	364	403	452
Insects	26	56	94	120	149	188	222	263	319	364	403	452
Mites	–	57	–	121	–	–	–	269	–	367	406	–
Nematodes	28	57	95	121	–	192	225	269	322	367	406	455
Other invertebrates	–	–	–	121	–	–	–	–	–	–	–	–
Protection and control	29	57	95	121	150	192	225	270	323	367	406	455
Miscellaneous	–	–	–	–	–	–	–	–	–	367	–	–
11. Range	29	58	96	–	150	193	225	271	323	367	407	455
12. Game and Wildlife	30	58	96	121	151	194	225	271	324	367	407	455
13. Fish. Aquaculture	31	59	98	121	151	194	226	273	324	369	408	457
14. Protection forests. Watershed/catchment management. Soil conservation	33	60	100	123	153	198	228	275	325	369	408	457
General	33	60	100	123	–	–	228	275	325	369	–	457
Watershed/catchment management. Water conservation. Hydrology	33	60	100	123	153	198	228	275	325	369	408	458
Soil conservation and erosion	33	60	101	124	154	198	228	275	326	370	–	458
Shelterbelts. Hedges	34	–	101	124	–	198	229	275	326	370	409	458
Revegetation and reclamation	34	60	101	124	154	199	229	275	326	370	409	458
Miscellaneous	–	–	–	–	–	–	–	–	–	–	–	–
15. Other land use. Nature conservation. Arboriculture	35	60	102	124	154	199	229	276	326	370	409	458
General	–	–	102	–	–	199	–	–	326	–	–	458
Land use and land-use policy and planning. Agri-silviculture	35	60	102	124	154	199	229	276	326	370	409	458
Nature conservation	35	61	102	124	154	200	230	277	327	371	409	459
Recreation, tourism, and rural amenity	36	61	102	124	155	200	230	277	327	372	410	460
Arboriculture, urban amenity	36	61	103	125	155	200	230	277	327	372	410	460
Miscellaneous	–	–	–	–	155	–	–	–	328	–	–	461
16. Dendrochronology and dendroclimatology	37	61	103	–	155	–	–	278	328	373	410	461

AUTHOR INDEX ... 487

SPECIES INDEX ... 513

SUBJECT INDEX ... 463

READERS' GUIDE

1. **Terminology.** Terms included in the *Concise Oxford Dictionary, Chamber's Dictionary of Science and Technology* and the *Terminology of Forest Science, Technology, Practice and Products* are used without explanation. Other terms from particular sciences may also be used without explanation if it is thought that they are familiar to those readers likely to be concerned.

2. **Title Citations:**

(a) Titles. Titles are given in the original language if a Latin alphabet is used. Russian (but generally not other Cyrillic alphabets) and Greek are given in standard transliterations. English translations – often shortened – are given in square brackets.

(b) Language symbols. Capital initial letters indicate the language of the text, small letters the language(s) of the summary. The following abbreviations are used:

Af	= Afrikaans	Fr	= French	Nl	= Dutch
Ar	= Arabic	Gr	= Greek	No	= Norwegian
Be	= White Russian	He	= Hebrew	Pl	= Polish
Bg	= Bulgarian	Hu	= Hungarian	Pt	= Portuguese
Ch	= Chinese	In	= Indonesian	Ro	= Rumanian
Cs	= Czech	Is	= Icelandic	Ru	= Russian
Da	= Danish	It	= Italian	Sh	= Serbo-Croatian
De	= German	Ja	= Japanese	Sk	= Slovakian
Ee	= Estonian	Ko	= Korean	Sn	= Slovenian
En	= English	Li	= Lithuanian	Sv	= Swedish
Es	= Spanish	Lv	= Latvian	Tr	= Turkish
Fi	= Finnish	Ma	= Macedonian	Uk	= Ukrainian

(c) Library Source. Capital letters at the end of a reference, where present—e.g. PR, ORS, etc.—show the place where the actual publication seen by the Bureau is lodged. Where no capital letters are cited the publication is lodged in the library of the Commonwealth Forestry Institute, Oxford. The following abbreviations are used:

APB	Commonwealth Bureau of Pastures and Field Crops, Hurley, Maidenhead, Berks SL6 5LR
BLL	British Library Lending Division, Boston Spa, Wetherby, Yorkshire LS23 7BQ
CFB	Commonwealth Forestry Bureau, South Parks Road, Oxford OX1 3RD
CGB	Commonwealth Bureau of Plant Breeding and Genetics, Department of Applied Biology, Downing Street, Cambridge CB2 3BX
CIE	Commonwealth Institute of Entomology, 56 Queen's Gate, London SW7 5JR
CMI	Commonwealth Mycological Institute, Ferry Lane, Kew, Richmond TW9 3AF
EMB	Commonwealth Bureau of Horticulture and Plantation Crops, East Malling Research Station, Maidstone, Kent ME19 6BJ
HSB	Rothamsted Experimental Station, Harpenden, Herts AL5 2JQ
IPC	Institute of Paper Chemistry, P.O. Box 1039, Appleton, Wisconsin 54911, USA.
LTP	Tropical Products Institute, 56/62 Gray's Inn Road, London WC1X 8LU
OAEc	Agricultural Economics Research Institute, Dartington House, Little Clarendon Street, Oxford, OX1 2HS.

OB	Bodleian Library, Oxford, OX1 2BB.
OBD	Dept. of Botany, South Parks Rd., Oxford, OX1 3RA.
OH	Hope Dept. of Entomology, University Museum, Parks Road, Oxford, OX1 3PW.
ORE	Department of Agriculture, Parks Road, Oxford, OX1 3PF.
ORS	Radcliffe Science Library, South Parks Road, Oxford, OX1 3QP.
OW	ARC Weed Research Organisation, Yarnton, Oxford, OX5 1PF.
OZ	Department of Zoology, Oxford, OX1 3PS.
PO	The British Library, Science Reference Library, 25 Southampton Buildings, Chancery Lane, London W.C.2.
PR	Building Research Establishment, Princes Risborough Laboratory, Aylesbury, Bucks HP17 9PX
Reinbek	Bundesforschungsanstalt fur Forst- und Holzwirtschaft, Leuschnerstrasse 91, 2050 Hamburg 80, W. Germany.
TRADA	Timber Research and Development Association, Hughenden Valley, High Wycombe, Bucks HP14 4ND.
X	Miscellaneous; apply to Commonwealth Forestry Bureau for details.

3. **Abbreviations, units and symbols.** (This section of the Readers' Guide will appear annually). Standard SI symbols are used for metric units; these are not included here. Occasionally, other symbols not listed here are used when it is thought that they will present no difficulty to the readers concerned; this includes many geographical abbreviations such as ACT, UK, Penn., etc.

Å	ångström
AAS	atomic absorption spectrometry
ABA	abscisic acid
a.c.	alternating current
ADP	adenosine diphosphate
a.e.	acid equivalent
AFNOR	Association Française de Normalisation
AFOCEL	Association Forêts-Cellulose
a.i.	active ingredient
alt.	altitude
approx.	approximately
ARMEF	Association pour la Rationalisation et la Mécanisation de l'Exploitation Forestière
ASTM	American Society for Testing Materials
ATP	adenosine triphosphate
Aug.	August
av.	average
b.a.	basal area
bar	bar
bd ft	board feet
b.h.	breast height
BHC	benzene hexachloride
BOD	biochemical oxygen demand
BP	before present
b.p.	boiling point
BS(I)	British Standard(s) (Institution)
Btu	British thermal unit
c.a.i.	current annual increment
cal	calorie
cAMP	cyclic adenosine monophosphate
Ci	curie
COD	chemical oxygen demand
coeff.	coefficient
COMECON	Council for Mutual Economic Aid
conc.	concentrated
concn.	concentration
const.	constant
CSIRO	Commonwealth Scientific and Industrial Research Organization (Australia)
cv.	cultivar
CV	coefficient of variation
d.b.h.	diameter at breast height
d.c.	direct current
DDT	dichlorodiphenyltrichloroethane
diam.	diameter
DIN	Deutsches Institut für Normung
dil	dilute
DM	dry matter
E.	east
ECE	Economic Commission for Europe
EEC	European Economic Community
e.g.	for example
EM	electron microscope
EPR	electron paramagnetic resonance
ERTS	earth resources technology satellite
ESR	electron spin resonance
et al.	and others
F	filial generation
°F	degree Fahrenheit
f.	son (after author)
FAO	Food and Agriculture Organization
Feb.	February
f.p.	freezing point
f.sp.	special form
ft	foot/feet
FU	food unit/fodder unit
GA	gibberellic acid
gal	gallon (Imperial or US)
GLC	gas-liquid chromatography
GOST	Gosudarstvennyĭ Obshchesoyuznyĭ Standart
h	hour
ha	hectare
hp	horse power
ht.	height
IAA	indole acetic acid
IB	internal bond
IBA	indole butyric acid
IBP	International Biological Programme
i.e.	that is
IR	infrared
ISO	International Organization for Standardardization
IUFRO	International Union of Forest Research Organizations
Jan.	January
kgf	kilogramme-force
lat.	latitude
lb	pound (weight)
lbf	pound-force
LD	lethal dose
long.	longitude
M	molar
m.a.i.	mean annual increment
max.	maximum
mbar	millibar
m.c.	moisture content
min	minute (time)
min.	minimum
ml	millilitre
MOE	modulus of elasticity
mol	mole
mol.	molecular
MOR	modulus of rupture
m.p.	melting point
N.	north
NAA	naphthyl acetic acid
NE	north-east
NMR	nuclear magentic resonance
Nov.	November
n.s.d.	no significant difference; not significantly different
NSSC	neutral sulphite semichemical
NW	north-west
o.b.	over bark
Oct.	October
OECD	Organization for Economic Cooperation and Development
opt.	optimum
oz	ounce
P	probability
Pa	pascal
p.a.	per annum
p.a.i.	periodic annual increment
PCP	pentachlorophenol
PEG	polyethylene glycol
PF	phenol formaldehyde
pH	hydrogen-ion concentration
p.p.	partly, in part
p.p.m.	parts per million
p.p.t.	parts per thousand
PVA	polyvinyl acetate
PVC	polyvinyl chloride
R	röntgen
r	coefficient of correlation
rad	rad
RF	resorcinol formaldehyde
RH	relative humidity
r.p.m.	revolutions per minute
S.	south
s.d.	standard deviation
SE	south-east
SEM	scanning electron microscope
Sept.	September
s.l.	in a broad sense
sol.	solution
sp.	species
sp.nov.	new species
s.s.	in a narrow sense
ssp.	subspecies
SW	south-west
syn.	synonym
TCA	trichloroacetic acid
TEM	transmission electron microscope
temp.	temperature
TIBA	triiodobenzoic acid
TLC	thin-layer chromatography
u.b.	under bark
UF	urea formaldehyde
UHF	ultra high frequency
ULV	ultra low volume
UNDP	United Nations Development Programme
USDA	United States Department of Agriculture
UV	ultraviolet
var.	variety
VHF	very high frequency
viz.	namely
vol.	volume
vs.	versus
v/v	volume/volume
W.	west
wk	week
wt.	weight
w/v	weight/volume
w/w	weight/weight
yr	year
3P	probability proportional to prediction
--′	minute (angle)
--″	second (angle)
∥	parallel
⊥	perpendicular

COMMONWEALTH FORESTRY BUREAU

South Parks Road, OXFORD OX1 3RD

All correspondence regarding *Bureau publications, subscriptions and purchase* should be addressed as indicated on the *outside back cover*. Correspondence on *other matters* within the scope of this Bureau should be addressed to:–

The Director, Commonwealth Forestry Bureau, South Parks Road, Oxford, England.

STAFF

Director

W. Finlayson, B.Sc.

Scientific Information Officers

Mary Bannerman, B.Sc.
Lesley Collingwood, B.Sc.
C.A.D. Elbourn, M.Sc.
Sharon Hall, B.Sc.
Anne Handley, B.Sc.
Everild Haynes, M.A., D. Phil.
A.H. Hyde, B.A., D.Phil.
Karen Langdon, B.Sc.
P.B. Pugh, B.Sc.
G.P. Richards, B.Sc., Ph.D.
Mirja Ruokonen, MH, FK, HuK.
Christine Sinclair, B.Sc., Ph.D.

Consultant Director

Professor J.L. Harley, M.A., D.Phil., F.R.S.

Other Contributors

Bridget Biggs, B.Sc.
Anne Bruce, B.Sc.
G.T. Creber, B.Sc.
R.H. Farmer, B.A., D.Sc.
Miss L. Gombrich, Dr.Jur.
W. Linnard, M.A., Dip.For., Ph.D.
B.E. St. L. Stuart, M.A.

The Commonwealth Forestry Bureau is one of 10 Bureaux and 4 Institutes which together form the Commonwealth Agricultural Bureaux, an organisation sponsored by the Commonwealth governments and the Republic of Ireland for the dissemination of information on research in agriculture and related subjects.

Forestry Abstracts is a monthly journal prepared by the Bureau and published by the Commonwealth Agricultural Bureaux.

Annual Subscription Rate

To subscribers in countries that are not members of CAB £115.00

The journal is available at a special rate to subscribers in countries which make a financial contribution to CAB (these are listed on the inside back cover).

Back Numbers

Back volumes of Forestry Abstracts are available and there are discounts up to a maximum of 50% on orders of more than 10 volumes. Microform editions of back volumes are available at 80% of price of paper editions.

Card Title Service

For full particulars, apply to Director, Commonwealth Forestry Bureau.

Forest Products Abstracts (FPA)

Also prepared by the Bureau, this journal deals with the extraction, utilization and marketing of wood and other forest products. The subscription rate in non-member countries is £60.

Orders and enquiries concerning subscriptions and back numbers should be sent to

CENTRAL SALES,
COMMONWEALTH AGRICULTURAL BUREAUX,
FARNHAM ROYAL, SLOUGH SL2 3BN, UK.

[Note: Prices are subject to change without notice]

COMMONWEALTH AGRICULTURAL BUREAUX

The Commonwealth Agricultural Bureaux (CAB) is a co-operative venture established by Commonwealth Governments to provide information and other specialised services for scientists and professional workers in agriculture and related fields. The organisation is controlled by an Executive Council composed of nominees of the various Commonwealth Governments, including one for the Dependent Territories. The following pages list the present members of the Executive Council, and Liaison Officers who form the primary link in the member country.

CAB has three main functions: a world agricultural information service, an identification service for entomology, mycology and helminthology, and a biocontrol service. CAB's information service is based on 46 abstract journals which, taken together, cover the whole range of agricultural science. Contemporary world literature in many languages is scanned for items worthy of noting by abstract or titles in the journals. Since 1973 all references have been made available in machine-readable form for batch searching and online retrieval. The database contains approximately 950,000 records and is increasing by 12,000 per month. Other publications include technical periodicals, annotated bibliographies, review articles and books. An information retrieval service ensures that individual needs are met, and also supplies photocopies of source papers.

The work of CAB is largely carried out through a number of Institutes and Bureaux, each dealing with a particular aspect of agricultural science. Enquiries on scientific aspects of CAB work should be sent to the Director of the appropriate Bureau. Other enquiries should be sent to the Executive Director, CAB, at the address below, or to Liaison Officers in member countries.

Headquarters

Farnham House, Farnham Royal, Slough SL2 3BN, UK
Tel: Farnham Common 2281
Telex: 847964
Cables: COMAG, SLOUGH

Executive Director: N.G. Jones, DFC, BSc
Editorial Director: J.R. Metcalfe, MA, PhD
Sales Director: J. Newton, BSc, PhD
Scientific Adviser: E.K. Woodford, OBE, MSc, PhD

Institutes

Commonwealth Institute of Entomology, 56 Queen's Gate, London SW7 5JR. Tel: 01-584-0067/8
Director: N.C. Pant, MScAgr, DIC, PhD, FNA.

Commonwealth Mycological Institute, Ferry Lane, Kew, Richmond TW9 3AF. Tel: 01-940-4086/7
Director: A. Johnston, BSc, AICTA, FIBiol.

Commonwealth Institute of Biological Control, Gordon Street, Curepe, Trinidad, West Indies. Tel: St. Augustine (662) 4173
Director: F.D. Bennett, BSA, PhD.

Commonwealth Institute of Helminthology, The White House, 103 St. Peter's Street, St. Albans, AL1 3EW, Herts. Tel: St. Albans (0727) 33151
Director: Miss S.M. Willmott, PhD, FIBiol.

Bureaux

Agricultural Economics, Dartington House, Little Clarendon Street, Oxford OX1 2HH. Tel: Oxford (0864) 59829.
Director: J.O. Jones, MA.

Animal Breeding and Genetics, Animal Breeding Research Organization, The King's Buildings, West Mains Road, Edinburgh EH9 3JX. Tel: Edinburgh (031) 667-6901
Director: J.D. Turton, BSc, MRCVS, DTVM.

Animal Health, Central Veterinary Laboratory, New Haw, Weybridge, KT15 3NB, Surrey. Tel: Byfleet (09323) 42826
Director: R.M. Mack, FRCVS.

Dairy Science & Technology, Lane End House, Shinfield, Reading RG2 9BB. Tel: Reading (0734) 883895
Director: E.J. Mann, NDD, CDD.

Forestry, Commonwealth Forestry Institute, South Parks Road, Oxford OX1 3RD. Tel: Oxford (0865) 57185
Director: W. Finlayson, BSc.

Horticulture & Plantation Crops, East Malling Research Station, Maidstone ME19 6BJ, Kent. Tel: West Malling (0732) 843833
Director: D.J. O'D. Bourke, MA, DipAgr, FLS.

Nutrition, Rowett Research Institute, Bucksburn, Aberdeen AB2 9SB. Tel: Bucksburn (0224) 712162
Director: A.A. Woodham, BSc, PhD, CChem, FRIC.

Pastures & Field Crops, Grassland Research Institute, Hurley, Maidenhead SL6 5LR. Tel: Littlewick Green (062 882) 3457
Director: P.J. Boyle, MA.

Plant Breeding & Genetics, Department of Applied Biology, Pembroke Street, Cambridge CB2 3DX. Tel: Cambridge (0223) 358381 (Ext. 216)
Director: R.H. Richens, MA, PhD.

Soils, Rothamsted Experimental Station, Harpenden AL5 2JQ, Herts. Tel: Harpenden (05827) 63133 (Ext. 271)
Director: B. Butters, MSc, DipAgr, DTA, DIC, ARCS.

ERRATA

(lines are counted from the beginning of the bibliographic data in each item.)

Volume 20

Page	*Abstract*	*Line*	
528	4297	16	For '2592-3' read '3592-3'

Volume 29

Author Index

789	Col. 2		Delete 'Browne, P.G. 5813' insert 'Browne, F.G. 5813'

Volume 35

756	7685	4	For '**thiadiazote**' read '**thiadiazole**'

Volume 37

195	2198	9	For 'soil' read 'sal'
416	4630	8	For '*Plistophora*' read '*Pleistophora*'

Volume 38

21	130	2	For '**Zealand Monographine**' read '**Zealand. Monographiae**'
179	1741	1	For 'RUSHWORTH' read 'RUSHFORTH'
227	2190	6	For '*Neophouzeaua*' read '*Neohouzeaua*'
298	2915	13	For '*Leucopsis*' read '*Leucopis*'
300	2940	1	For '***Cephaleia***' read '***Cephalcia***'
590	5875	3	Before '*Journal of Forestry*' insert '*Quarterly*'

Author Index

722	Col. 2		Delete 'Rushworth, K.D. 1741' insert 'Rushforth, K.D. 1741'

Species Index

734	Col. 1		For '***Cephaleia abietis*** 2940' read '***Cephalcia abietis*** 2940'
740	Col. 2		For '***Leucopsis* spp.** 2915' read '***Leucopis* spp.** 2915'

Volume 39

56	453	4	For 'lesnyk' read 'lesnykh'
56	453	13	For '*Elaegnus*' read '*Elaeagnus*'
70	603	2	For '***Cremenulopsis***' read '***Crumenulopsis***'
266	2642	9	For '*Hypophthalmicthys*' read '*Hypophthalmichthys*'
270	2694	17	For '*Eleagnus*' read '*Elaeagnus*'
394	3954	13	After '*Polyporus*' insert '[*Hirschioporus*]'
437	4403	9	After '*Coleophora fuscedinella*' insert '[*C. serratella*]'
508	5120	1	For 'HOLMAN' read 'HOLMEN'
508	5120	4/5	For '*Avdelningarna för Skogsekologi och Skoglig Marklära*' read '*Rapporter och Uppsatser, Institutionen för Växtekologi och Marklära*'
528	5342	1	For 'KRÜSSMAN' read 'KRÜSSMANN'

Author Index

555	Col. 2		Delete 'Holman, H. 5120' insert 'Holmen, H. 5120'
558	Col. 1		Delete 'Krüssman, G.' insert 'Krüssmann, G.'

Species Index

576	Col. 2		Delete '***Coleophora fuscedinella*** 4403' insert '***Coleophora serratella*** 4403'
581	Col. 1		For '***Hyblaea purea***' read '***Hyblaea puera***'
592	Col. 2		Delete '***Polyporus abietinus*** 3954' insert '***Hirschioporus abietinus*** 3954'

Page	*Abstract*	*Line*	
Volume 40			
7	63	1	Before '**regeneration**' insert '**artificial**'
15	145	1	For 'MEEWIG' read 'MEEUWIG'
24	244	1	For 'ABDULKADAR' read 'ABDULKADIR'
32	336	7	For '*Hypopthalmichthys*' read '*Hypophthalmichthys*'
35	363	3	For '*Research Paper*' read '*Report*'
39	390	9	For '*John, E.C.*' read '*Jahn, E.C.*'
40	398	2	For '**Bläter**' read '**Blätter**'
52	519	2	For '***Hymenaea coubaril***' read '***Hymenaea courbaril***'
54	535	9	For '100' read '1000'
67	613		Abstract should appear under section 12 Game and Wildlife
68	621	2	Before 'SWEDISH' insert 'SWEDEN,'
68	625	1	Before 'EIDGENÖSSISCHE' insert 'SWITZERLAND,'
82	763	1	For 'F.N.' read 'F.H.'
85	799	1	For 'SINKEL' read 'ZINKEL'
92	870	7	After '*Scleroderris lagerbergii*' insert '[*Gremmeniella abietina*]'
96	914	11	For '*Symphoricarpus*' read '*Symphoricarpos*'
96	914	13	For '*Odocoileus hemonius*' read '*Odocoileus hemionus*'
103	994	2	For '**radical**' read '**radial**'
108	1026	1	For 'BARROS, N.F.' read 'BARROS, N.F. de'
108	1030	2	For 'BARROS, N.F.' read 'BARROS, N.F. de'
113	1075	1	Before 'SCOTTISH' insert 'UK,'
120	1139	8	For '*leptostylus*' read '*leptostyla*'
144	1378	3	After '***giganteum***' insert '[***Sequoia gigantea***]'
148	1414	1	For 'DWINNELL' read 'DWINELL'
190	1845	10	For '*Eucosoma*' read '*Eucosma*'
191	1848	12	After '*lineatum*' insert '[*Xyloterus lineatus*]'
191	1858	14	After '*lineatum*' insert '[*Xyloterus lineatus*]'
197	1923	2	For '***Siluris***' read '***Silurus***'
203	1970	29	For '*Dalject-Singh*' read '*Daljeet-Singh*'
203	1972	2	For 'FOREST' read 'FORESTRY'
232	2247	1	For 'FOREST' read 'FORESTRY'
232	2248	1	For 'FOREST' read 'FORESTRY'
233	2250	1	For 'FOREST' read 'FORESTRY'
236	2277	8	After '*giganteum*' insert '[*Sequoia gigantea*]'
246	2393	2	For 'FOREST' read 'FORESTRY'
257	2500	7	After '*conferta*' insert '[*Q. frainetto*],'
259	2519	10	For '*suffructicosa*' read '*suffruticosa*'
260	2529	1	For 'DWINNELL' read 'DWINELL'
260	2531	12	After '*S. lagerbergii*' insert '[*Gremmeniella abietina*]'
267	2608	9	For '*radicus*' read '*radicis*'
279	2735	1	For 'INRA' read 'INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE'
280	2739	1	For 'FOREST' read 'FORESTRY'
280	2740	1	For 'FOREST' read 'FORESTRY'
280	2741	1	For 'FOREST' read 'FORESTRY'
281	2742	1	For 'FOREST' read 'FORESTRY'
281	2743	1	For 'FOREST' read 'FORESTRY'
281	2744	1	For 'FOREST' read 'FORESTRY'
281	2745	1	For 'FOREST' read 'FORESTRY'
281	2746	1	For 'FOREST' read 'FORESTRY'
281	2747	1	For 'FOREST' read 'FORESTRY'
281	2748	1	For 'FOREST' read 'FORESTRY'
296	2905	5	After '*giganteum*' insert '[*Sequoia gigantea*]'
313	3091	11	After '*S. lagerbergii*' insert '[*Gremmeniella abietina*]'
321	3171	4	For '*tremula*' read '*tremulae*'
333	3277	1	For 'SIDA' read 'SWEDISH INTERNATIONAL DEVELOPMENT AUTHORITY'
340	3352	1	For 'CTGREF' read 'CENTRE TECHNIQUE DU GÉNIE RURAL, DES EAUX ET DES FORÊTS'
349	3456	23	For '*Reticulotermes*' read '*Reticulitermes*'
359	3575	2	For '***Colleotrichum***' read '***Colletotrichum***'
366	3651	1	For 'EIDMAN' read 'EIDMANN'

Page	*Abstract*	*Line*	
369	3680	9	For '*elephas*' read '*elaphus*'
406	4093	12	After '*lineatum*' insert '[*Xyloterus lineatus*]'
410	4151	1	For 'N.S.W.' read 'NEW SOUTH WALES'
415	4180	7	For '9 190 000 h' read '9 190 000 ha'
415	4187	18	After '*Poria*' insert '[*Inonotus*]'
418	4218	4	For '*Metsänjalostus Säätiö*' read '*Metsänjalostussäätiö*'
422	4268	4	For 'kehitysvaiheesso' read 'kehitysvaiheessa'
429	4344	3	For '*Skogsteknologisk*' read '*Skogteknologisk*'
434	4400	4	For 'aspecter' read 'aspekter'
450	4620	12	For '*Gingko*' read '*Ginkgo*'
456	4686	3	For 'confortaföoryngringar' read 'confortaföryngringar'